

Chula Vista Climate Change Impacts & Adaptation Options

WATER

Draft Updated: 1/14/10

CLIMATE CHANGES		IMPACT TO SAN DIEGO REGION		HOW IS CHULA VISTA VULNERABLE TO IMPACTS? (pressure on economy, physical infrastructure, society, environment, & other systems)		ADAPTATION OPTIONS (potential responses to manage vulnerabilities)		Source of Adaptation Option	
Declining snowpack & Colorado River flows	Diminished imported water supplies	A	Lower imported water supplies available for residential, municipal, and commercial users, and exposure to extended and more intense droughts						
					1	Meter all water uses to monitor, track, and bill for actual use	ICLEI Clean Air Partnership		
					2	Collaborate with Water Districts to establish shared conservation goals/programs	Chula Vista Phoenix		
					3	Prioritize water conservation in municipal code	Phoenix Alamagordo		
					4	Promote Water Districts' free water use survey program	Chula Vista		
					5	Support inclining block rate or volumetric water pricing to encourage efficient use	ICLEI Clean Air Partnership		
					6	Require Landcape Companies to obtain certification showing that they have completed a water management/conservation training	Naples EPA		
					7	Promote educational tours of water resources for public/students to encourage behavioral modification	Sweetwater Otay Water		
					8	Require buildings to obtain complete water efficieny retrofit on resale	San Diego		
					9	Change building codes to require low flow plumbing	Chula Vista ICLEI		
					10	Require use of water-efficient measures (indoor & outdoor) in all new municipal facilities or at time of renovation	Punta Gorda		
					11	Improve visibility of water conservation on city website/collatoral/publicity	Miami-Dade Denver		
					12	Integrate water conservation concerns into the municipal project procurement process	Los Angeles		
					13	Ensure fire hydrant locking mechanisms minimize water leakage	Sweetwater/Otay New York City		
					14	Partner with Water Districts to expand notification of and adherence to water shortage alert level changes amongst residents	———		
					15	Work with local Water Districts to update "Water Shortage Response Ordinance" to include reduced imported supplies	ICLEI		
					16	Strengthen and enforce water waste prohibitions	Rohnert Park		
		B	Increased pressure to meet local water demand through local supplies						
				17	Investigate broader use of reclaimed/recycled water	Austin Largo Tuscon			
				18	Facilitate & educate residents and businesses about appropriate uses and benefits of graywater systems and new standards	Malibu San Diego County			

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			19 Devise graywater storage and reuse systems to recycle and utilize water resources more efficiently	Keene Clean Air Partnership
			20 Support expanded exploration of desalination or indirect potable reuse to augment local supplies	Carlsbad Sand City
		C Difficulty meeting increase in water demand for new development & expected growth		
			21 Require new buildings/developments to plan for gray or recycled water systems	Chula Vista Phoenix
			22 Encourage Water Districts to include the assessment of climate change in their analysis and decision-making process for "Will-Serve" letter issuance for new developments	Sweetwater/Otay Focus 2050 Study
			23 Require large new developments to provide "water offsets" for additional water demand	Cambria
		D Increasingly expensive water rates expose vulnerable populations (such as low income families) to expend higher proportion of income on utilities		
			24 Target outreach of existing efficiency upgrade programs to low-income neighborhoods and small businesses	The Climate Gap Report
			25 Develop outreach and incentives appropriate for rental market where existing incentives don't connect property-owner/customer of record and water user (renter)	The Climate Gap Report
More extreme weather events & precipitation	Drier local conditions	E Lower local ground water supplies available for Chula Vista		
			26 Work with local Water Districts and community to actively monitor groundwater supplies and recharge rates to understand impacts	Sweetwater Authority Public Policy Institute of California
			27 Establish a limit on area of impervious surface allowable in new development to improve groundwater recharge (mainly benefit private wells)	Punta Gorda
			28 Adopt an ordinance to identify and protect the integrity and sustainability of aquifer/groundwater recharge areas (mainly benefit private wells)	Keene California DWR
		F Soil moisture deficits in non-irrigated agriculture, landscaped areas, and natural systems		
			29 Incorporate evapotranspiration (ETo) rates into the Landscape Water Conservation Ordinance due to drier local conditions	Chula Vista Chicago
		G Lower rainfall amounts causes higher concentrations of pollutants in urban runoff		
			30 Revisit City's Stormwater regulations and Best Management Practices (BMP) requirements to manage higher concentrations of pollutants in runoff	Chicago ICLEI
	Wetter wet years	H Raised threat to physical infrastructure from floods		

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			31 Monitor and seek out more actionable science on possible increase in flood risk due to changes in rainfall intensity, duration, and frequency due to climate change	New York City Focus 2050 Study ICLEI
			32 Work through the County's Multi-Jurisdiction Hazard Mitigation Plan process to update flood (and other hazard) risk as it increases with climate change impacts	ICLEI
			33 Incorporate increased flood risk into General Plan Safety Element	ICLEI
			34 Avoid siting new development in areas with less than a 200-year level of flood protection	Keene California DWR
			35 Preserve and improve ecological buffers to protect built environment from floods (e.g. wetlands)	Punta Gorda
			36 Improve remaining undersized and inadequate storm drains	County Multi-Jurisdiction Hazard Mitigation Plan
			37 Provide incentives for the installation of rain barrels/cisterns/green roofs to reduce storm water runoff	New York City City of Ames
			38 Improve methods to use and enhance natural landscape and drainage features for runoff control	New York City
			39 Improve information to property owners outside 100-yr floodplain about inundation risk, so they can decide to purchase flood insurance even if not required	Public Policy Institute of California
		I Water quality impacted from floods which cause erosion, and thus turbidity and other pollution concerns		
			40 Support restoration of natural watershed processes in a way that increases infiltration, slow runoff, improves water quality, and augments natural storage of water	California DWR

Main Sources for Listed Local Impacts

A	Focus 2050 Study (November 2008), California Climate Adaptation Strategy (December 2009), San Diego County Water Authority Strategic Plan (April 2008)	F	California Adaptation Strategy, p80-81 (December 2009).
B	San Diego County Water Authority Strategic Plan (April 2008)	G	California Department of Water Resources, "Managing an Uncertain Future" (October 2008). Dr. Rick Gersberg, "Effects of Global Climate Change and Development on Runoff Water Quality into the Coastal Zone of San Diego County" (2009).
C	Focus 2050 Study Technical Assessment, page 22 (2008).	H	Focus 2050 Study Working Papers, page 34 (2008).
D	Focus 2050 Study Technical Assessment, page 39 (2008). San Diego County Water Authority Strategic Plan (April 2008), University of Southern California, "The Climate Gap."	I	California Department of Water Resources, "Managing an Uncertain Future" (October 2008). Dr. Rick Gersberg, "Effects of Global Climate Change and Development on Runoff Water Quality into the Coastal Zone of San Diego County" (2009)
E	Focus 2050 Study Technical Assessment, page 21 (2008).		